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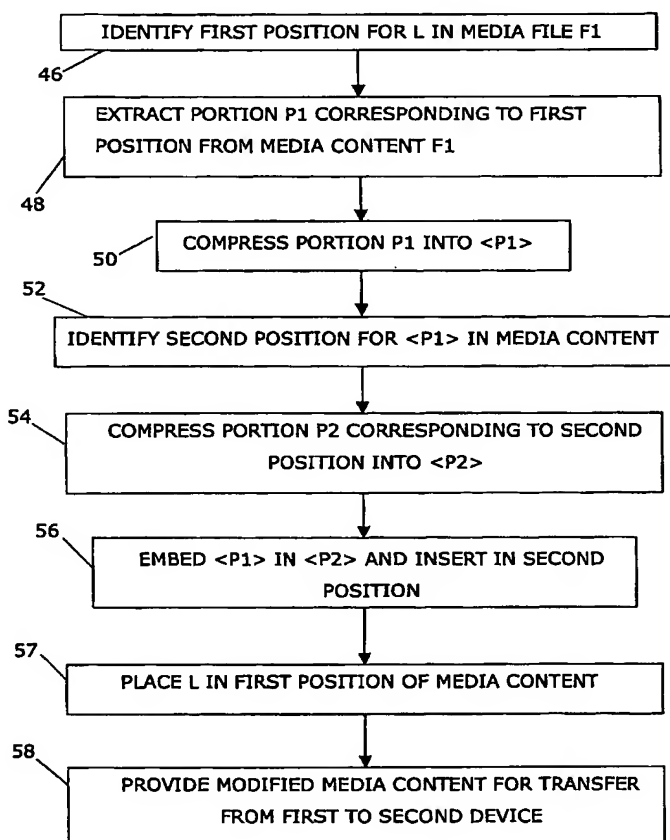
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[Continued on next page]

(54) Title: **PERCEPTIBLE REVERSIBLE WATERMARKS**



(57) Abstract: The invention relates to methods, devices and a signal, where an encoder compresses a first piece of information in the form of at least a first limited part of an image, provides perceptible additional information (38) related to the image, and provides the compressed first piece of information (40) in the image (36) and a decoder retrieves the image including the compressed first piece of information in the form of at least a first limited part of the image as well as the perceptible additional information, retrieves the perceptible additional information, and decompresses at least the compressed piece of information essentially without losses for provision of at least one of image and perceptible additional information essentially without losses. The invention also relates to an image editor, a computer program product and a computer program element for processing additional information (38) such that the original image is restorable.

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European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Declaration under Rule 4.17:**

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*ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)*

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**A. CLASSIFICATION OF SUBJECT MATTER**  
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According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

INSPEC, EPO-Internal, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	FRIDRICH J ET AL: "Lossless data embedding for all image formats" SECURITY AND WATERMARKING OF MULTIMEDIA CONTENTS IV, SAN JOSE, CA, USA, 21-24 JAN. 2002, vol. 4675, pages 572-583, XP002275676 Proceedings of the SPIE - The International Society for Optical Engineering, 2002, SPIE-Int. Soc. Opt. Eng, USA ISSN: 0277-786X	1,4-7, 9-13, 17-19
Y	figure 1 abstract * section 2 *	20-27

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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nal Application No  
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	INOUE S ET AL: "A 6-MHZ NTSC-COMPATIBLE WIDESCREEN TELEVISION SYSTEM WITH PAN-AND-SCAN CAPABILITY" SMPTE JOURNAL, SMPTE INC. SCARSDALE, N.Y, US, vol. 99, no. 8, 1 August 1990 (1990-08-01), pages 639-643, XP000142533 ISSN: 0036-1682 page 640	13
Y	--- DITTMANN J ET AL: "Interactive watermarking environments" MULTIMEDIA COMPUTING AND SYSTEMS, 1998. PROCEEDINGS. IEEE INTERNATIONAL CONFERENCE ON AUSTIN, TX, USA 28 JUNE-1 JULY 1998, LOS ALAMITOS, CA, USA, IEEE COMPUT. SOC, US, 28 June 1998 (1998-06-28), pages 286-294, XP010291548 ISBN: 0-8186-8557-3 abstract * section 3.1 *	20-27
A	--- US 6 490 681 B1 (KOBAYASHI SEIJI ET AL) 3 December 2002 (2002-12-03) figure 8 column 3	1-27
A	--- FRIDRICH J ET AL: "Invertible authentication" SECURITY AND WATERMARKING OF MULTIMEDIA CONTENTS III, SAN JOSE, CA, USA, 22-25 JAN. 2001, vol. 4314, pages 197-208, XP001189306 Proceedings of the SPIE - The International Society for Optical Engineering, 2001, SPIE-Int. Soc. Opt. Eng, USA ISSN: 0277-786X * section 3 *	1-27
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,A	<p>XIAOTAO GUO ET AL: "Lossless watermarking scheme for enhancing security of medical data in PACS"</p> <p>MEDICAL IMAGING 2003. PACS AND INTEGRATED MEDICAL INFORMATION SYSTEMS: DESIGN AND EVALUATION, SAN DIEGO, CA, USA, 18-20 FEB. 2003,</p> <p>vol. 5033, pages 350-359, XP002275678</p> <p>Proceedings of the SPIE - The International Society for Optical Engineering, 2003, SPIE-Int. Soc. Opt. Eng, USA</p> <p>ISSN: 0277-786X</p> <p>* sections 1, 2.1 *</p> <p>-----</p>	1-27

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